

Remarks/Arguments

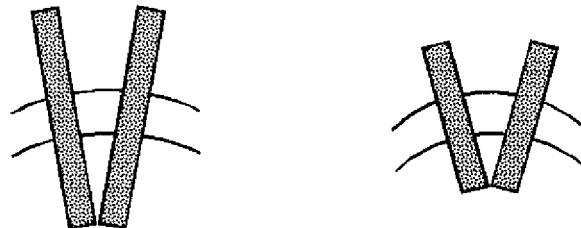
Applicants have received and carefully reviewed the Office Action of the Examiner mailed June 11, 2009. Currently, claims 47-58 remain pending. Claims 47-58 have been rejected. Favorable consideration of the following remarks is respectfully requested.

Claim Rejections – 35 USC § 103

Claims 47, 48, 49, 50, 52-54, and 56-58 were rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (U.S. Patent No. 5,059,186), hereinafter Yamamoto, as modified by Koehler et al. (U.S. Patent No. 3,395,244). After careful review, Applicant must respectfully traverse this rejection.

“All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). (MPEP § 2143.03). As discussed previously, nowhere does Yamamoto appear to disclose a “proximal hub portion and the distal strain relief portion are monolithically molded as a single piece of a single material; wherein the distal strain relief portion has a first flexibility adjacent a distal end thereof and a second flexibility different from the first flexibility adjacent a proximal end thereof”. The Examiner appears to not to have addressed the recited limitation, found in independent claims 47 and 54. The only embodiments of Yamamoto which appears to disclose even a stress relief portion, as opposed to the recited strain relief, appears to be limited to those embodiments in which “the soft plastic tube 101 is formed integrally with the relatively hard hub 102 indicating that stress relief is desirable only when the two components are of different soft and hard materials. The alternate structure, also described by Yamamoto in the paragraph at col. 9, lines 14-28 appears to be disclosed as having the tube (101) “formed as a separate component”. Thus neither construction appears to disclose a distal strain relief portion “monolithically molded as a single piece of a single material” as recited in claims 47 and 54. Applicants presume that the Examiner’s failure to address this deficiency is an admission that Yamamoto and Koehler do not teach the limitation.

The Examiner has asserted that Fig. 1 and column 1, lines 53-55 of Koehler disclose that “it is known to use molded grooved extending orthogonally into the lumen in a helical fashion in the strain relief portion which has a varied flexibility along its length”. Neither Fig. 1 nor column 1, lines 53-55 appear to disclose a lumen, the space inside a tubular structure, much less a lumen having grooves, long narrow channels or depressions, extending into such a space, it being unclear how a depression could extend into a space. The interconnected series washers of Koehler appear to function not by limiting or relieving strain within the construct, but rather by varying the diameters of the washers at a fixed spacing which alters the angular displacement between successive washers at which they come into mechanical contact as stops along the inner radius as illustrated in Figs. 9 and 10 and discussed at col. 4, lines 55-66. See the sketch below:



In the Response to Arguments, the Examiner has asserted without support that an element of Yamamoto “prevents stress”, stress being a cause of strain, and thus inherently provides a strain relief portion. A stress relief element does not prevent stress; it only limits it to the local yield stress of the material by substituting deformational strain energy for what formerly had been elastic stress. As noted earlier, stress relief generally relies upon the principle of plastic yielding at flaw tips resulting in a local relief of stress and a blunting of the crack tip within the body. Thus stress relief is a local material response which typically results in irreversible plastic deformation of the material when the yield stress of the material is exceeded. Accordingly, the operation of a stress relief element generates irreversible strain within the element. Rather than relieving strain, the functional result of an ordinary stress relief element is to generate permanent strain in response to stress. Accordingly, one of ordinary skill in the art seeking to minimize or

eliminate strain would not be motivated to turn to the device of Yamamoto which would be expected to create strain in response to applied stresses.

In suggesting that the stress relief element of Yamamoto be replaced by the strain relief element of Koehler, the Examiner appears to suggest an impermissible modification of the principle of operation of Yamamoto. (MPEP 2143.01, Part VI.)

For these and other reasons, Yamamoto in view of Koehler as applied to independent claims 47 and 54 appears to fail two elements of the *Graham* inquiry in that the resulting structure does not appear to be structurally and functionally equivalent and one of ordinary skill in the art would not be motivated to make the necessary modifications.

“the *Graham* factors, including secondary considerations when present, are the controlling inquiries in any obviousness analysis. The *Graham* factors were reaffirmed and relied upon by the Supreme Court in its consideration and determination of obviousness in the fact situation presented in *KSR*, 550 U.S. at ___, 82 USPQ2d at 1391 (2007).” (MPEP 2141, II.)

Although the Examiner has also asserted that modification of the stress relief element of Yamamoto by helical grooves of Koehler “would increase the flexibility of the strain relief portion”, Applicants note that, in addition to the previously discussed distinction between stress relief and strain relief and the fact that Yamamoto does not appear to discuss the use of stress relief (or strain relief) in a device which is monolithically molded as a single piece of a single material, it is unclear how the substitution of helical grooves for the grooves of “a corrugated or ribbed molding 110” would materially influence the flexibility of the molding or why one of ordinary skill in the art would expect it to do so.

Therefore, Yamamoto in view of Koehler does not appear to teach all the claim limitations, as is required to establish a *prima facie* case of obviousness and Applicants respectfully request that the rejections of claims 47 and 54 be withdrawn.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.

Cir. 1988). (MPEP 2143.03) Accordingly, claims 48, 49, 50, 52, 53, and 56-58, which depend from nonobvious independent claims 47 and 54 respectively, are also believed to be nonobvious and Applicants respectfully request that the rejections be withdrawn.

Claim 51 was rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto as modified by Koehler in further view of Wijkamp et al. (U.S. Patent No. 5,167,647). After careful review, Applicant must respectfully traverse this rejection.

As discussed above, Yamamoto as modified by Koehler fails to render obvious claim 47 from which claim 51 depends. The wings of Wijkamp do not appear to overcome the deficiencies of Yamamoto as modified by Koehler as applied to independent claim 47. Accordingly claim 51, which depends from nonobvious independent claim 47, also is believed to be nonobvious and Applicants respectfully request that the rejection be withdrawn.

Claim 55 was rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto as modified by Koehler in further view of Bartholomew (U.S. Patent No. 4,802,947). After careful review, Applicant must respectfully traverse this rejection.

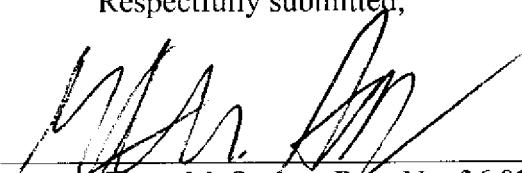
As discussed above, Yamamoto as modified by Koehler fails to render obvious claim 54 from which claim 55 depends. The flared catheter of Bartholomew does not appear to overcome the deficiencies of Yamamoto as modified by Koehler as applied to independent claim 54. Accordingly claim 55, which depends from nonobvious independent claim 54, also is believed to be nonobvious and Applicants respectfully request that the rejection be withdrawn.

In the Response to Arguments, the Examiner repeats the incorrect analysis of stress relief as opposed to strain relief as discussed in greater detail above. Further, the Examiner has indicated a position that, in both Yamamoto and Koehler, the hub portions are designed to prevent wear and damage. Instead, the hub portions appear to be designed to connect to another device. As also noted above, the principles of operation of Yamamoto and Koehler are significantly different and of Yamamoto modified by Koehler would appear to impermissibly replace a device which depends upon a stress

relief molding with a series of mechanically cooperating mechanical stops which do not appear to provide stress relief. (MPEP 2143.01, Part VI.) Further, the stress relief molding of Yamamoto appears to be present in Yamamoto only in embodiments which are not monolithically molded as a single piece of a single material and so substitution of the purported strain relief section of Koehler for the molding of Yamamoto in those embodiments would not appear to result in the claimed invention.

In view of the foregoing, all pending claims are believed to be in a condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested. Issuance of a Notice of Allowance in due course is anticipated. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,



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